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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/626,625	07/27/2000	Robert G. Gann	10001227-1	1161

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EXAMINER

SAFAIPOUR, HOUSHANG

ART UNIT

PAPER NUMBER

2622

DATE MAILED: 08/13/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/626,625

Applicant(s)

GANN, ROBERT G.

Examiner

Houshang Safaipoor

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 July 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.

- 4) ☐ Interview Summary (PTO-413) Page No(s) \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-459)
- 6) ☐ Other: \_\_\_\_

*ML*  
EDWARD COLES  
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**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 and 7-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai (U.S. Patent No. 6,222,934) and further in view of Ozawa et al. (U.S. Patent No. 5,227,896).

As acknowledged by the applicant, a flat bed scanner typically includes a calibration area within a portion of the flatbed scanner. To perform calibration, the flat bed scanner scans the calibration area and then based on the analysis of the captured image data for the known calibration area, the scanner adjusts/corrects for defects (or quality errors) such as variations of illumination, sensor sensitivity, pixel errors, etc. (page 2 of the specification). Further, flatbed scanners typically include a calibration area that is utilized to accurately imitate the reflected path of light when scanning the original (page 4, line 10-12). Therefore, in examiner's opinion, it would have been obvious to a person of an ordinary skill in the art to utilize such flatbed scanner as the scanning/calibration device in an overhead/look down scanning apparatus.

Regarding claim 1, Tsai discloses a calibration area within digital imaging device to capture image data for said calibration area (col. 3, line 58, test chart 208), Ozawa et al. discloses that an image reader may be mounted on a stand (fig. 5(b), col. 5, lines 7 and 8) to form a look down imaging device. Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to combine Tsai's device with that of Ozawa, because,

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the combination would form a look down imaging apparatus with calibration area within the device;

analyzing said captured image data for said calibration area (fig. 2, columns 2 and 3 and as admitted by the applicant); and

adjusting the imaging of said look-down digital imaging device based on said analysis of said captured image data for said calibration area (fig. 2, columns 2 and 3 and as admitted by the applicant).

Regarding claim 2, Tsai discloses the method of claim 1 further comprising: focusing on said calibration area (fig. 2, col. 3, lines 50-64).

Regarding claim 3, Tsai discloses the method of claim 2 wherein said focusing further comprises:

folding the optical path of light reflected from said calibration area for said scanning of said calibration area (illustrated in fig. 2).

Regarding claim 4, Tsai discloses the method of claim 1 further comprising:  
illuminating said calibration area during said scanning step (fig. 2., col. 3, lines 50-64)

Regarding claim 5, Tsai discloses the method of claim 1 further comprising:  
aligning a scan head of said look-down digital imaging device with said calibration area for performing said scanning step (fig. 2).

Regarding claim 7, arguments analogous to those presented for claim are applicable to claim 7.

Regarding claim 8, Tsai discloses Tsai discloses the digital imaging device of claim 7 further comprising a scan head (fig. 2, col. 3, lines 50-64).

Regarding claim 9, Tsai discloses the digital imaging device of claim 8 wherein said scan

head is movable to align with said calibration area (fig. 2, col. 3, lines 50-64).

Regarding claim 10, Tsai discloses the digital imaging device of claim 8 wherein said scan head includes:

sensor for imaging an original image placed substantially below said look-down digital imaging device (fig. 2, col. 3, lines 50-64); and

lens for focusing reflected light from said original to said sensor (fig. 2, col. 3, lines 50-64).

Regarding claim 11, Tsai discloses the digital imaging device of claim 10 wherein said sensor is a linear sensor (fig. 2, col. 3, lines 50-64).

Regarding claim 12, Tsai discloses the digital imaging device of claim 7 wherein said look-down digital imaging device is operable to achieve an in-focus scan of said calibration area for calibration of said look-down digital imaging device (fig. 2, col. 3, lines 50-64).

Regarding claim 13, Tsai discloses the digital imaging device of claim 12 wherein the optical path of light reflected from said calibration area during a scan of said calibration area is folded (as illustrated in fig. 2).

Regarding claim 14, Tsai discloses the digital imaging device of claim 13 further comprising:

at least one mirror for folding the optical path of light reflected from said calibration area (fig. 2, col. 3, lines 50-64).

Regarding claim 15, arguments analogous to those presented for claim 1 are applicable to claim 15.

Regarding claim 16, utilization of high resolution linear sensor in scanning devices is

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well known in the art (Official Notice). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to utilize high resolution linear sensor in combination of Tsai and Ozawa 's device, to create images with improved resolution.

Regarding claim 17, arguments analogous to those presented for claim 1 are applicable to claim 17.

Regarding claim 18, Tsai discloses the system of claim 17 wherein said means for calibrating further includes means for focusing said imaging means on said calibration area (fig. 2, col. 3, lines 50-64).

Regarding claim 19, Tsai discloses the system of claim 17 wherein said means for calibrating further includes means for folding the optical path of light reflected from said calibration area (as illustrated in fig. 2).

Claims 6 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai (U.S. Patent No. 6,222,934) and in view of Ozawa et al. (U.S. Patent No. 5,227,896) and further in view of Applicant's Admitted Prior Art (AAPA).

Regarding claim 6, neither Tsai nor Ozawa discloses the method of claim 1 wherein said adjusting step comprises at least one adjustment type selected from the group consisting of adjusting imaging hardware of said digital imaging device; adjusting imaging software of said digital imaging device; and adjusting imaging software of a computer device to which said digital imaging device is coupled. AAPA discloses such an imaging device (page 3, lines 8-21). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to include the adjustment features described in AAPA in combination of Tsai and Ozawa's device, for proper calibration and adjustment of the device.

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Regarding claim 20, arguments analogous to those presented for claim 6 are applicable to claim 20.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Houshang Safaipoor whose telephone number is (703)306-4037. The examiner can normally be reached on Mon.-Thurs. from 6:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L Coles, Sr. can be reached on (703)305-4712. The fax phone numbers for the organization where this application or proceeding is assigned is (703)872-9314 for regular and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-0377.



Houshang Safaipoor  
Patent Examiner  
Art Unit 2622  
August 10, 2003



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